

No: 7/90

Ref: EW/C1162

Category: 2c

**Aircraft Type
and Registration:**

Bell 206B JetRanger III, G-BPWI

No & Type of Engines:

1 Allison 250-C20B turboshaft engine

Year of Manufacture:

1980

Date and Time (UTC):

21 May 1990 at 0745 hrs

Location:

Wicketslap Farm, Daviot, Nr Inverurie, Scotland

Type of Flight:

Commercial

Persons on Board:

Crew - 1 Passengers - None

Injuries:

Crew - Nil Passengers - N/A Other - 1 (fatal)

Nature of Damage:

Ground handling assistant killed. Helicopter tail rotor blades distorted and minor skin damage to the tail boom

Commander's Licence:

Airline Transport Pilot's Licence (Helicopters)

Commander's Age:

26 years

**Commander's Total
Flying Experience:**

2081 hours (of which 125 were on type)

Information Source:

AAIB Field Investigation

The helicopter, one of two operated by the company, had been parked on the small apron outside the front of their hangar. The apron is directly in front of the hangar, which points approximately east, continuing for 16 metres outwards from the hangar doors and slightly widening from the width of the doors to 8 metres at the far end. Looking outwards from the doors, the helicopter was parked pointing about 30° to the left and on the western edge of the apron, such that the nose was positioned inside the far end of the apron. Significantly, this left slightly under half of the apron width to the right of the tail rotor, with a considerable width of unpaved but impacted surface to the right of that.

A local farmhand had for the previous few months been acting as an assistant to the helicopter operation and had on many occasions operated an external battery pack used to start the helicopter on the first flight of each day. The batteries are contained in a box fastened to the flat top of a wheelbarrow cart and the cable from them is normally wrapped around the handles whilst the cart is being manoeuvred.

Customarily, when the pilot indicates removal of the batteries, the assistant unplugs them from the nose of the helicopter, winds the cable around the cart handles and pushes it to the corner of the apron on the front right of the pilot. The assistant then gives the pilot a thumbs-up signal and walks, with the cart,

down that side of the apron, subsequently veering slightly to his left towards the shed on the south side of the hangar, where the cart is kept.

On the morning of 21 May, when the normal procedures and checks had been carried out, the engine was started and it stabilised at ground idling speed. The pilot immediately indicated to the assistant, who had been standing forward and to the right side of the helicopter, that he should remove the external power. The assistant unplugged the cable, which he then wrapped around the cart handles, and moved off with the cart to the forward right corner of the apron (relative to the helicopter), from where he gave a thumbs-up to the pilot indicating that his task was complete. He then pushed the cart back towards the hangar, along the same side of the apron, until he was lost to the sight of the pilot.

The helicopter had been running with rotors turning for little more than 30 seconds when the pilot suddenly felt a severe vibration apparently originating from the tail end of the helicopter and saw the assistant's hat flying past the window. Realising what may have happened, he immediately shut down the engine and climbed out, to find the assistant lying on the ground beneath the tail rotor. He saw that he could be of no help and so went to telephone for assistance.

There were no eye witnesses to the accident and no evidence could be found to suggest a reason why the assistant deviated considerably to the right of his customary direction of travel and thus walked beneath the helicopter's tail boom directly into the tail rotor. It is even more difficult to understand because, when the helicopter is not in use for contract work it is used to carry out joy-ride flights and these passengers are given a ground safety briefing by the assistant, who had drawn a large briefing board clearly displaying the danger area around the tail rotor.